

DISCUSSION OF THE AMENDMENT

Claims 1-25 are active in the present application. Claims 22-25 are new claims.

Support for the new claims is found in the original claims. Independent Claim 1 is amended for matters of form. The dependent claims are amended for matters of form.

No new matter is believed to have been added by this amendment.

REMARKS/ARGUMENTS

Packaging bony meat presents a special problem in the food packaging industry because bones have a tendency to penetrate and/or damage packing materials used to package bony meat products (i.e., “bone-in” cuts of meat). For example:

Packaging envelopes for meat with bones (bags usually consisting of a tubular film sealed by the manufacturer at one end with a transversal seal seam) not only must be impermeable to oxygen and water vapor, so as to prevent spoiling or drying of the packaged items, but are also required to withstand high mechanical stress during filling and further steps of packaging following sealing of the bag, such as shrinking the envelope onto the packaged items by heating, and during storage and shipping. In particular, there is a risk of sharp bones piercing through the packaging envelope. Therefore, in addition to any other properties important to packaging envelopes for meat, such meat packagings must have good sealability, with absolute tightness of the seal seam even under load, as well as high puncture resistance.

See paragraph [0002] of the PG publication corresponding with the present application (i.e., U.S. 20050287322).

In the present specification Applicants disclose an invention that solves this long-standing problem in the food packaging industry. The presently claimed tubular film may be used to successfully package bony meat products and provide high seam seal strength and high resistance to penetration from bones.

The examples of the present specification demonstrate the improvement provided by the invention disclosed in the present application. Example 2 described in paragraphs [0035]-[0041] of the present specification describes a tubular film made from five layers. The first four layers of the tubular film of Example 2 are polyolefin-based layers (see paragraph [0036]). The fifth layer, i.e., the outside layer of the tubular film, is a polyamide layer. Paragraph [0041] uses seal seam strength and damaging energy (measured according to DIN 53373) as a way to measure penetration resistance (see paragraph [0026]). Comparative Example 1 described in paragraphs [0043]-[0046] is a five-layered tubular film that was

produced in the same manner as inventive Example 2, however, the five-layered tubular film of Comparative Example 1 includes a polyamide layer as the first, inner layer, then three polyolefin layers and finally a polyamide layer. It is readily evident that the seal seam strength (measured with and without soiling) for Comparative Example 1 is substantially lower than the seal seam strengths provided by the tubular film of the invention, i.e., Example 2 (compare the tables in paragraphs [0041] and [0045]). Additionally, it takes much less energy to damage the film of Comparative Example 1 (compare paragraphs [0042] with [0046]).

Thus, the tubular film of the present claims is superior to the tubular film of Comparative Example 1 which contains polyamide layers as both inside and outside layers.

The Office rejected the claims as obvious over Grund (U.S. 5,612,104) alone or in combination with Vroomas (5,021,510) and/or Idlas (5,759,648). It is the Office's opinion that Grund discloses five-layered tubular films that differ with respect to the presently claimed invention by failing to include a polyolefin film as an inner layer (see paragraph no. 7 on page 5 of the December 14, 2008 Office Action). The Office asserts, however, that it would be obvious to substitute or include a polyolefin film as the inner layer of the Grund tubular films because polyolefin layers were well known for heat sealing properties and/or for improving structural integrity of laminates (see paragraph no. 8 on page 6 of the December 14 Office Action).

Applicants submit that the Office's rejection of the claims ignores evidence provided in the present specification that is probative of patentability. Applicants further submit that the rejections are based on mere hindsight and do not take into consideration the fact that Applicants' presently claimed invention addresses a long-felt and previously unsatisfied need in the food packaging art.

With regard to the rejection of the present claims over Grund, Applicants draw the Office's attention to the fact that the present specification discusses the Grund work at length. Applicants described the problems associated with the Grund packaging film in paragraph [0007] of the PG publication corresponding with the present specification. Applicants' specification makes reference to DE 4339337 which corresponds with U.S. 5,612,104 (i.e., Grund). Applicants explicitly disclose in the present application that conventional tubular films suffer from disadvantages making their use in packaging bony meat products impractical. For example, in paragraph [0008] Applicants point out that conventional tubular films, e.g., tubular films such as those disclosed in Grund, "have disadvantageous technological properties in that their strength is not sufficient to avoid piercing thereof by bones contained therein together with meat." Applicants further point out that seal seam strength is a crucial issue when using tubular films to package bony meat products.

As already discussed above, Applicants have shown that the particular combination of four inside polyolefin layers and an outer polyamide layer provides a tubular film that exhibits significantly superior seal seam strength and resistance to mechanical damage in comparison to other five-layered films. Grund and the other publications cited by the Office do not disclose or recognize the particular problems associated with packaging films for bony meat products. In fact, the Grund film is used for packaging sausages and/or pasty meat products (see the last sentence in paragraph no. 6 on page 5 of the December 14 Office Action).

Applicants on the other hand disclose to the public a particular tubular film that addresses the problems associated with packaging of bony meat products. The U.S. patent system is designed so that the rewards of making an invention go to inventors who publicly disclose their inventions. In this instance Applicants disclosed to the public a packaging product, e.g., a tubular film, that solves a long-standing problem in the packaging art.

Applicants should therefore be rewarded for their inventive efforts and subsequent public disclosure with a patent.

Significantly, the Grund patent discloses films having inner and outer layers of polyamide in a five-layer packaging film (see the abstract of Grund). As was discussed above, the present specification provides a side-by-side comparison of a film of the presently claimed invention with a film having the layer structure of Grund. The conventional films of Grund are proven to be significantly inferior to the tubular films of the presently claimed invention.

The rejection over Grund should be withdrawn in view of the significant improvement demonstrated for the claimed invention in comparison to the Grund films in view of the fact that none of the cited publications disclose that such an improvement can be realized with a tubular film meeting the present claim limitations.

As further explained in detail by Applicants in the present application, conventional tubular films were known in the art to be unsatisfactory for packaging bony meat products at the time the presently claimed invention was filed. For example, U.S. Patent No. 6,004,599 describes a solution for packaging bony meat products that is nothing more than double packaging each bony meat product. Obviously such double packaging is inconvenient, expensive and thus undesirable (e.g., “cumbersome and costly” see paragraph [0003] of the present application).

A further conventional strategy for packaging bony meat products is described by Applicants in paragraphs [0010]-[0013] of the present application. In AU 199938013 a packaging product is disclosed in which reinforcement sections are adhered to a tubular film product. The difficulties of such a strategy for packaging bony meat products are immediately evident. If the bone of the bony meat product does not appear in exactly the same place in each package, the reinforced portion will not be able to carry out its function.

Both of the above-discussed U.S. 6,004,599 and AU 199938013 were filed after the filing date of Grund. Applicants submit that these applications are probative of the patentability of the presently claimed invention. For example, if solving the problem of packaging bony meat products was only a matter of substituting the inner polyamide film of Grund for a polyolefin film, the above-mentioned U.S. and AU patents would not have been necessary. In fact, to the contrary, those of skill in the art had to turn to the impractical and unsatisfactory solutions disclosed in U.S. 6,004,599 and AU 199938013 to solve the problem; namely, it was necessary to either double bag or separately adhere a reinforcement “patch” to packages for bony meat products.

Applicants submit that those of ordinary skill in the art would not have substituted the polyamide inner layer of Grund for a polyolefin layer because the Grund package was one designed for packing sausages and there is no suggestion in the art cited by the Office that improved bone piercing resistance could be obtained by substituting an inner polyamide layer with a polyolefin layer. This reasoning is buttressed by the disclosure of U.S. 6,004,599 and AU 199938013 which disclose impractical packaging solutions for bony meat products based on other tubular film structures which must include a reinforcing means (e.g., a double bag and/or an adhered reinforcement).

With respect to the Office’s reliance on Idlas, Applicants point out that the Idlas patent discloses a film product having a substantially different structure from the presently claimed invention. For example, in simplified form the structure of the Idlas film may include first and second layers of polyolefin, a third layer of ethylene vinyl alcohol polymer, and fourth and fifth layers of polyolefins. While Idlas discloses that such a packaging film may be useful for certain food products, there is no disclosure or suggestion that improved resistance to penetration by bones of a bony meat product may be obtained. Moreover, the films of Idlas have substantially different heat sealing strengths. For example, Idlas discloses

that very high heat sealing temperatures must be applied in order to obtain acceptable seal strength (see column 25 of Idlas).

In comparison with Idlas the presently claimed invention is able to provide a tubular film product having a significantly lower sealing temperature and concurrently providing high seal strength even when the seal is soiled with a food product.

In the alternate, the Office cites to Vroomans (U.S. 5,021,510) for a teaching that polyolefin layers were well known for heat sealing properties and thus would be obvious to use as the first inner layer of the presently claimed invention. As already discussed above for other conventional packaging films, Vroomans does not disclose or suggest that the particular problems of packaging bony meat products may be solved by using the series of polymer layers such as that presently claimed.

Applicants submit that the art relied on by the Examiner does not suggest that the presently claimed tubular packaging film is a solution to a long-felt need for a packaging film that can be used to package bony eat products. The fact that Applicants' invention solves this problem is probative of patentability. Applicants thus submit that the pending claims should be allowed over the art relied on by the Office.

The Office further rejected the claims under obviousness-type double patenting over co-pending application 10/518,542. Applicants submit that the present application and co-pending application have the same filing date and thus no unjustified extension of patent term would result if both patents issued. Applicants thus request withdrawal of the obviousness-type double patenting rejection.

Applicants reserve the right to file a Terminal Disclaimer later, if necessary.

Applicants thank the Examiner for acknowledging the PTO-1449 forms submitted in this case and all of the references cited thereon by indicating their consideration at the bottom of each form.

The amendment to the claims obviates the rejections and/or objections under 35
U.S.C. § 112.

For the reasons discussed above in detail, Applicants submit that all now-pending
claims are in condition for allowance. Applicants request withdrawal of the rejection and the
mailing of a Notice of Allowance acknowledging the patentability of the presently claimed
subject matter.

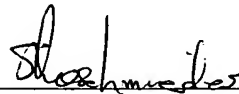
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